UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,843	11/21/2003	Ravi L. Sahita	42P16358	1945

7590 08/11/2008

Blakely, Sokoloff, Taylor & Zafman LLP
Suite 101
5285 S.W. Meadows Road
Lake Oswego, OR 97035

EXAMINER	
GEE, JASON KAI YIN	
ART UNIT	**PAPER NUMBER**
2134	

MAIL DATE	DELIVERY MODE
08/11/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

IFW

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,843	11/21/2003	Ravi L. Sahita	42P16358	1945

7590 06/23/2008

Blakely, Sokoloff, Taylor & Zafman LLP
Suite 101
5285 S.W. Meadows Road
Lake Oswego, OR 97035

EXAMINER	
GEE, JASON KAI YIN	
ART UNIT	**PAPER NUMBER**
2134	

MAIL DATE	DELIVERY MODE
06/23/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/718,843	SAHITA, RAVI L.	
	Examiner	Art Unit	
	JASON K. GEE	2134	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is response to communication: response to original application received 11/21/2003.

2. Claims 1-33 are current pending in this application. Claims 1, 20, 23, and 30 are independent claims.

3. No IDS has been received for this application.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 23-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 23-33, the claims recite a machine-accessible medium. However, in the applicant's publication, in paragraph 70, the definition of a machine-accessible medium includes propagated signals such as carrier waves and infrared waves. Signals such as these are directed toward non-statutory subject matter.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-33 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per all the claims, the claims recite determining the states of the stream of packets. In addition, the independent claims recite that current states and destination states of the packet streams are determined. It is unclear what a 'state' of a packet stream is. The metes and bounds of the term are unclear, as the term 'state' is so broad it may encompass any aspect of packet transmissions. In a communication system, streams of packets go through many different 'states.' States such as the protocol the packets belong to, the location of the stream, and much more may be considered states of a stream/flow. The applicant is advised to clearly describe what a state of a flow refers to, as it is unclear what the bounds are of the claimed limitation.

Further, the claims recite determining whether a rules table exists for the protocol. It is unclear what would happen if no rule table exist. If no rule table exists, non of the following steps will be active, and the method/system would just be directed to identifying the protocol and flow of the packet. Identifying the protocol and flow of the packet without doing anything about it would lead to a non useful tangible result, and would bring upon a 101 rejection.

As per claims 7-9, claim 7 recites determining whether the flow causes a skip count to be reached. It is unclear how or when a skip count will be reached. Is the skip count reached when it hits a threshold value, or is the skip count reached every time the counter increments?

Also, as per claim 7, it is unclear what it means to "skip the flow." The metes and bounds of the term 'skip' are unclear as it is not understood what action occurs when a flow is skipped.

As per claim 11-12, the claim recites that hashing functions are performed according to a number related to a skip count. It is unclear whether the hashing functions are performed to the skip count itself, or a number that is merely related/associated with the count. Also, it is unclear what a skip count is, and how a value is supposed to be hashed in accordance with this skip count.

As per claim 14, the claim recites performing an operation using the current state and combined source states indicated in a state-transition rule. It is unclear what this operation consists of, and the metes and bounds of the term are unclear.

As per claim 17, the claim recites evicting the match entry flow entry. It is not clear what evicting an entry on a table consists of.

Claim 22 is rejected using the same basis of arguments used to reject claim 14 above.

Claims 24-26 is rejected using the same basis of arguments used to reject claim 7-9 above.

It is noted that there are many 112 rejections throughout the reference. The claims will be examined as best understood by the Examiner, and the references may be reconsidered once the claimed invention is made more clear.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1, 2, 10, 13, 14, 16, 17, 20-23, 27, 28, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pandya US Patent Application Publication 2004/0010545 (hereinafter Pandya), and in view of Sekar US Patent Application Publication 2004/0098617 (hereinafter Sekar).

As per claim 1, Pandya teaches a method for filtering packets, wherein a flow corresponds to a stream of packets for a particular communication session, comprising: identifying a protocol used to transmit a packet (paragraph 117); identifying the flow to which the packet belongs (117 and 134); and determining whether a rules table exists for the protocol (paragraph 117 and 128). However, Pandya does not teach all the limitations of the claims. However, these limitations are taught by Sekar. Sekar teaches determining whether a state of the flow will transition from a current state indicated in the matching flow entry to a valid destination state, and discarding the packet if the state of the flow will not transition to the valid destination state (paragraph 75). Although Sekar does not explicitly teach the use of state tables, Sekar teaches throughout the reference of managing the states and transitions of the flow. Further, Pandya teaches the use of utilizing rules and actions set up in a variety of tables (paragraph 117).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the teachings of Pandya with Sekar. One of ordinary skill in the art would have been motivated to include such additions to increase security by including network intrusion detection that will be effective in detecting novel attacks and to prevent false alarms. (Sekar paragraphs 12-13).

As per claim 2, Sahita and Sekar teach throughout the reference the use of state machines (a state machine is finite) (see Sekar throughout the reference, such as abstract; also see Padya throughout reference, such as paragraph 119). Also, as taught by Sahita in paragraphs 117, the protocols are capable of being defined.

As per claim 10, Pandya teaches performing a hashing function based, at least in part, on values in the packet (paragraphs 119, 134); determining whether a flow entry matches a result of the hashing function (paragraph 134); determining, if the flow entry matches the result, whether the packet values hashed to generate the result match values used to generate the flow entry (paragraphs 119, 127, 134); and determinig, if the packet values match the values used to generate the flow entry, that the flow entry is in the matching flow entry (paragraphs 119, 127, 134, and throughout the reference).

As per claim 13, the claim limitations are taught throughout the Pandya reference, such as in paragraphs 117 and 119. These sections teach identifying, if the state table fails to include the matching flow entry, a set of one or more state-transition rules having an indication to create an additional flow entry (paragraph 117 and 119); determining whether the packet includes a transition pattern indicated in a state-transition rule in the set, wherein the transition pattern indicates that the additional flow

entry is to be created (paragraphs 117 and 119); creating the additional flow entry if the packet includes the transition pattern (paragraphs 117 and 119); and discarding the packet, if the packet fails to include the transition pattern (Sekar paragraph 75).

As per claim 14, Pandya teaches performing an operation using the current state and combined source states indicated in a state-transition rule (paragraphs 117, 119, 121, and also Sekar paragraph 75); determining whether the current state matches a result of the operation (Sekar paragraph 75 and Pandya paragraphs 117, 119, 121, 123 and 128); determining, if the current state matches the result of the operation, that eh combined source states include the current state (paragraph 120-125); determining, as a result of the combined source states including the current state, whether the packet includes a transition pattern indicated in the state-transition rule (paragraphs 117, 119, 127, 134 and Sedkar paragraph 75); and determining if the packet includes the transition pattern, that the state of the flow will transition from the current state to the valid destination state in the transition rule in the set (Sedkar paragraph 75).

As per claim 16, Pandya teaches the limitations of the claims throughout the reference, such as in paragraphs 117, 119, 121, and 123, and also in Sedkar such as in paragraph 75.

As per claim 17, Pandya teaches determinig whether the source state-destination pair includes an evict indication, and evicting the matching flow entry if the source state-destination state pair includes the evict indication (paragraph 75 of Sedkar and Pandya paragraph 128).

Claim 20 is rejected using the same basis of arguments used to reject claim 1 above.

Claim 21 is rejected using the same basis of arguments used to reject claim 10 above.

Claim 22 is rejected using the same basis of arguments used to reject claim 14 above.

Claim 23 is rejected using the same basis of arguments used to reject claim 1 above.

Claim 27 is rejected using the same basis of arguments used to reject claim 10 above.

Claim 28 is rejected using the same basis of arguments used to reject claim 13 above.

Claim 30 is rejected using the same basis of arguments used to reject claim 1 above. Network interface adapters are essential to the systems taught by Pandya and Sedkar.

Claim 31 is rejected using the same basis of arguments used to reject claim 10 above.

Claim 32 is rejected using the same basis of arguments used to reject claim 13 above.

10. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pandya and Sekar as applied above, and further in view of Syvanne et al. US Patent Application Publication 2002/0112189 (hereinafter Syvanne).

As per claim 3, Sekar teaches use of different protocols, such as the hypertext transfer protocol (such as in paragraph 32). For more information regarding different protocols regarding state-based transition, see Syvanne throughout the reference, such as in paragraphs 80-81.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the Pandya combination with the Syvanne reference. One of ordinary skill in the art would have been motivated to perform such an addition to present a flexible and reliable synchronization of state information between communication nodes (paragraph 19 of Syvanne).

As per claim 4, Syvanne teaches discarding the packet if no rules table exists for the protocol (paragraph 7).

As per claim 5, Syvanne teaches transmitting the packet if no rules table exists for the protocol (paragraph 9). Also, this would have been obvious, if not inherent. If no rules exists for a communication system, any type of packet would be permitted to flow into a system.

As per claim 6, Sekar teaches transmitting the packet if the flow will transition to the valid destination state (paragraphs 31-32, 39, and throughout the reference.

11. Claims 7-9. 18, 19, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pandya and Sekar as applied above, and further in view of Ferguson et al. US Patent No. 6,798,777 (hereinafter Ferguson).

As per claim 7, as best understood by the Examiner, all the limitations are not explicitly taught by the Pandya combination. However, these limitations are taught throughout Ferguson, such as in col. 28 lines 20-55.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Ferguson with the Pandya combination. One of ordinary skill in the art would have been motivated to perform such an addition to enable advanced filtering and policing to operations without incurring expensive increases in the memory requirements of the system due to the extra time required to perform the extra operations. (col. 2 lines 15-25).

As per claim 8, Ferguson teaches determining that a number of actual flows fails to exceed a preset threshold of flows, and examining flows based on the skip count, as a result of the number of actual flows failing to exceed the preset threshold (col. 28 lines 20-55).

As per claim 9, Ferguson teaches determining that a number of actual flows exceeds a preset threshold of flows; determining a number of preset steps by which the number of actual flows exceeds the preset threshold; multiplying the number of preset steps by a preset ski-count modifier, and changing the skip count to a different skip count equal to the product of the preset number of steps and the preset skip-count modifier (col. 28 lines 20-55).

As per claim 18, Sedkar teaches discarding the packet, if the packet fails to include the transition pattern included in a plurality of state-transition rules whose combined source states include the current state (paragraph 75 also Ferguson col. 28 lines 20-55).

As per claim 19, Sedkar teaches determining whether the packet causes a predetermined number of packets associated with invalid transitions to be reached, and discarding the packet, if the packet causes the predetermined number to be reached (paragraph 75 also Ferguson col. 28 lines 20-55).

Claims 24-26 is rejected using the same basis of arguments used to reject claim 7-9 above.

12. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pandya Sekar, and Ferguson as applied above, and further in view of Craig et al. US Patent Application Publication 2003/0053448 (hereinafter Craig).

As per claim 11, Ferguson and Pandya teaches these limitations, such as in col. 28 lines 20-55 of Ferguson and paragraphs 119, 127, 134 of Pandya. Further, Craig teaches in more details relating to hashing functions and skipping, Such as in paragraph 73.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include the teachings of Craig with the Pandya combination. One of ordinary skill in the art would have been motivated to perform such an addition to increase the speed and efficiency of the system. (paragraph 15 of Craig).

As per claim 12, Ferguson and Pandya teaches these limitations, such as in col. 28 lines 20-55 of Ferguson and paragraphs 119, 127, 134 of Pandya. Also see Crag paragraph 73.

13. Claims 15, 29, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pandya and Sekar as applied above, and further in view of Lakshman et al. US Patent No. 6,289,013 (hereinafter Lakshman).

As per claim 15, The Pandya combination does not explicitly teach using an AND operation. However, this would have been obvious, as indicated by Lakshman, in col. 7 lines 35-60.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include operations such as AND in packet filtering. One of ordinary skill in the art would have been motivated to perform such an addition to increase the speed and efficiency of time of packet filtering, as described in col. 3 lines 45 to col. 4 line 10 of Lakshman.

Claim 29 is rejected using the same basis of arguments used to reject claims 14 and 15 above.

Claim 33 is rejected using the same basis of arguments used to reject claim 29 above.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason K. Gee whose telephone number is (571) 272-6431. The examiner can normally be reached on M-F, 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Gee
Patent Examiner
Technology Center 2100
06/19/2008

/Kambiz Zand/

Supervisory Patent Examiner, Art Unit 2134

Notice of References Cited	Application/Control No. 10/718,843	Applicant(s)/Patent Under Reexamination SAHITA, RAVI L.	
	Examiner JASON K. GEE	Art Unit 2134	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2004/0098617	05-2004	Sekar, Ramasubramanian	713/201
*	B	US-2004/0010545	01-2004	Pandya, Ashish A.	709/203
*	C	US-6,798,777	09-2004	Ferguson et al.	370/392
*	D	US-2002/0112189	08-2002	Syvanne et al.	713/201
*	E	US-2003/0053448	03-2003	Craig et al.	370/353
*	F	US-6,289,013	09-2001	Lakshman et al.	370/389
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

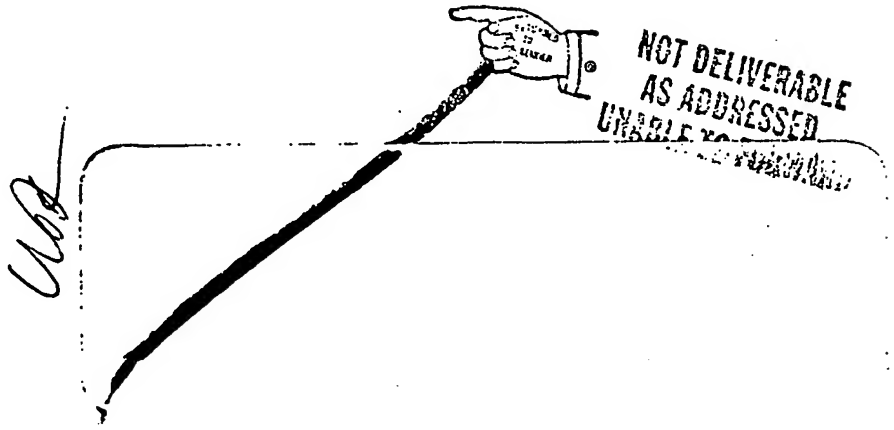
*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

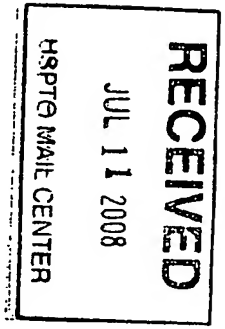
Organization [illegible] Bldg.
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
If Undeliverable Return in Ten Days

$ 01.34[0]
MAILED FROM ZIPCODE 22313

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

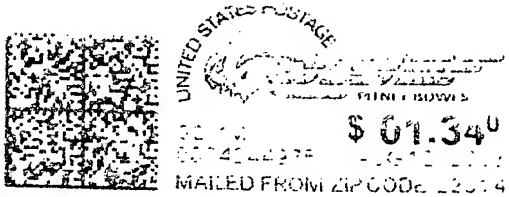
AN EQUAL OPPORTUNITY EMPLOYER





Organization _____ Bldg/Room
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
If Undeliverable Return in Ten Days

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300



AN EQUAL OPPORTUNITY EMPLOYER